

REMARKS

The Office Action mailed on March 17, 2009, has been reviewed and the comments of the Patent and Trademark Office have been considered. Prior to this paper, claims 1-18 were pending, with claims 2-10 and 12-16 being withdrawn from prosecution. By this paper, Applicant does not cancel or add any claims. Therefore, claims 1-18 remain pending.

Applicant respectfully submits that the present application is in condition for allowance for at least the reasons that follow.

Rejections Under 35 U.S.C. § 103

Claims 1, 11, 17 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kurosu (JP 2003-139161). In response, Applicant traverses the rejections for at least the reasons that follow.

Claim 1 recites a power transmission device comprising, among other elements, a coupling member that comprises:

(i) sandwich portions sandwiching a first pin, wherein each of the sandwich portions comprises one or more surfaces each disposed between the adjacent projections and opposed to the outside circumferential surface of the first pin at a regular distance;

(ii) a curved portion that has a hole through and into which the second pin is passed and fitted.

Claim 1 further recites that (iii) the “first pin is sandwiched between the sandwich portions by inserting the first pin into a spacing between the sidepiece portions and then pressing the first pin toward the bent portion side to deform the bent portions in a direction away from each other.”

The Office Action asserts that Kurosu discloses all of these elements. Applicant disagrees, and respectfully submits that Kurosu discloses none of elements (i), (ii) and (iii). Kurosu describes a power transmission device including a coupling member (elastic member 11). The coupling member includes a pair of bent portions (engagement portions 12 and 13) and a curved portion (pressed portion 14). The bent portions have sandwich portions each of which includes one surface (engagement groove 12a or 13a) disposed between two projections and opposed to the outside circumferential surface of a first pin (engagement pin

5 or 6). The curved portion has an engagement groove (14a) to be pressed against a second pin (collar 10). See Figs 1 and 3-5.

However, Kurosu fails to teach or suggest the above-identified elements i-iii. Regarding element “i,” the first pin of Kurosu contacts with one surface with no space therebetween, so as to be firmly engaged to the sandwich portion (see Fig. 1 in Kurosu as compared to Fig. A in the Office Action). Kurosu only conveys that there is no space between the first pin and the sandwich portion. In contrast, *the first pin of the invention of claim 1 contacts with two or more projections* when the first pin is sandwiched between the sandwich portions. This configuration has the advantageous feature that a contact area between the first pin and the coupling member is kept to a minimum. As the result, in an embodiment according to claim 1, the coupling member can support the first pin by sandwiching without being unstable, which keeps the displacement of sandwiching position and the generation of noise and wear to a minimum. This configuration further has, in an exemplary embodiment, the advantageous feature that the pull-out load necessary to release the first pin from the coupling member is prevented from being affected by the age-degradation of the coupling member, which allows power transmission to be always cut off at a constant torque load. (See page 24, lines 9-18, and page 35, line 21 –to page 36 line 4.)

Regarding “ii,” the curved portion of Kurosu does not have a hole, but instead, the engagement groove (14a). The engagement groove is pressed against the second pin when the first pin is coupled to the second pin via the coupling member (see paragraph 0020 and Fig. 1). In this regard, the Office Action’s interpretation regarding the member assigned to the reference number “10” in Kurnsu. The member is not a hole, but instead the collar into which a screw “9” is to be inserted. The collar into which the screw has been inserted corresponds to the second pin. (See paragraph 0020 and Fig. 2). In contrast, the invention of claim 1 is directed to the coupling member to which the second pin is coupled even if an excess torque load is applied to the coupling member. Kurosu teaches a coupling member from which the second pin is released if an excess torque load is applied to the coupling member. (See paragraph 0020 and Figs. 4-5). Therefore, it is respectfully submitted that it would not have been obvious to *modify the coupling member of Kurosu to form a hole on the coupling member because this modification contradicts the direction of Kurosu.*

Regarding “iii,” Kurosu does not teach or suggest a process for sandwiching the first pin between the sandwich portions while *preventing the first pin and two or more projections from being damaged in order to stabilize a torque load necessary to release the first pin from the coupling member*. Kurosu merely describes a process for releasing the first pin from the coupling member. (See Figs. 4-5). In contrast, claim 1 recites that *the direction from which the first pin of the claimed invention is sandwiched between the sandwich portions is opposed to the direction from which the first pin is released from the sandwich portions*. This prevents the first pin and two or more projections from being damaged, which stabilizes a torque load necessary to release the first pin from the coupling member.

In summary, claim 1 is not obvious in view of Kurosu. Claim 18 is not obvious for at least the reasons that prevent claim 1 from being obvious.

Regarding claim 17, claim 17 recites, *inter alia*, a method for manufacturing a power transmission device, comprising the steps of:

fitting a second pin into a hole of a coupling member wherein the second pin is mounted on one of a first transmission member and a second transmission member;

inserting a first pin into a spacing of the coupling member wherein the first pin is mounted on the other of the first transmission member and the second transmission member; and

sandwiching the first pin between sandwich portions of the coupling member by rotating the transmission member on which the first pin is mounted to move the first pin toward an open end side of the spacing.

As noted above, it would not have been obvious to modify the coupling member of Kurosu to form a hole on the coupling member because this modification contradicts the direction of Kurosu, and Kurosu does not teach or suggest a process for sandwiching the first pin between the sandwich portions while preventing the first pin and two or more projections from being damaged in order to stabilize a torque load necessary to release the first pin from the coupling member.

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The Office Action recognizes that Kurosu does not explicitly disclose one pin sandwiched by the sandwiching member, but asserts that it would have been obvious “to modify the pins (5 or 6) of Kurosu to be an integral pin structure in order to simplify the structure.” Applicant traverses this assertion, and points out that the Office Action provides no evidence that the ordinary artisan would have recognized that such a modification would “simplify the structure.” Accordingly, a *prima facie* case of obviousness has not been established for at least this additional reason.

Rejoinder of Claims 2-10 and 12-16

Claims 2-10 and 12-16 stand withdrawn. Applicant notes that these claims depend either directly or ultimately from claim 1. Applicant respectfully requests that these claims be rejoined and allowed due to their dependency from claim 1, a claim that is allowable. Applicant respectfully submits that no significant burden is placed on the PTO by rejoining and examining these claims. Indeed, such action is concomitant with the indication that “upon allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim.”

Conclusion

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith,

Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

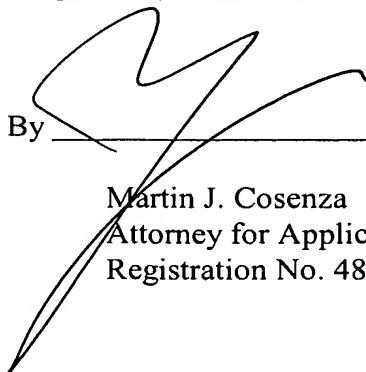
Examiner Altun is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

Date

7/17/2009

By



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